



MassDEP

Commonwealth of Massachusetts

Department of Environmental Protection

Massachusetts' 2013-2015 Three Year Electric and Gas Energy Efficiency Plan

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State Implementation Plan Steering
Committee



Massachusetts' 2008 Green Communities Act (GCA)

- Requires Massachusetts electric and gas distribution companies and electric municipal aggregators (aka Program Administrators or PAs) to “*prepare an electric efficiency investment plan*”
- The “*plan shall provide for the acquisition of all available energy efficiency and demand reduction resources that are cost effective or less expensive than supply*”



Massachusetts is National EE Leader

- MA has been ranked #1 by the American Council for an Energy-Efficient Economy (ACEEE) in their annual state-by-state energy efficiency scorecard for two years in a row
- Ranking is based on utility EE programs and policy, transportation, building energy codes, combined heat and power projects, state government initiatives and appliance efficiency standards



EE Plan Development

- Even before GCA, PAs worked with state agencies to develop and implement energy efficiency (EE) efforts
- GCA requires PAs to consult with an Energy Efficiency Advisory Council (EEAC) representing stakeholders (residential, low income, business, environment, labor, attorney general, MassDEP...)
 - First Three-Year Plan for 2010-2012
 - Second Three-Year Plan for 2013-2015 submitted 11/2/12 to MA Department of Public Utilities (DPU) for approval



2013-2015 Goals, Benefits and Costs

	Three-Year Plan Provision
Electric PA Total Annual Energy Savings Goals (MWh)	3,705,368
Gas PA Total Annual Energy Savings Goals (Therms)	72,011,183
Benefits (\$, million) - Electric and Gas Combined	\$8,922
Benefits (\$, million) - Electric	\$7,638
Benefits (\$, million) - Gas	\$1,284
Budget (\$, million) - Electric and Gas Combined	\$2,018.8
Budget (\$, million) - Electric	\$1,495.7
Budget (\$, million) - Gas	\$523.1
Cost per Annual kWh Saved - Electric	\$0.4036
Cost per Annual Therm Saved - Gas	\$7.264



Electric Savings Goals:

Savings as % of Projected MWh Sales

ELECTRIC	November 2nd Plan		
	2013	2014	2015
Statewide	2.50%	2.55%	2.60%
National Grid	2.53%	2.59%	2.64%
NSTAR	2.51%	2.57%	2.61%
WMECo	2.58%	2.70%	2.82%
CLC	2.08%	1.92%	1.92%
Unitil	1.68%	1.72%	1.74%

ELECTRIC	November 2nd Plan			
	2013	2014	2015	2013-2015
Sales (MWh)	47,763,309	48,460,704	48,960,921	145,184,934
Annual Savings (MWh)	1,194,556	1,236,268	1,274,544	3,705,368
Savings as % Of Sales	2.50%	2.55%	2.60%	2.55%
Budgets	\$481,315,926	\$495,657,181	\$518,725,224	\$1,495,698,331
Cost per Annual kWh Saved	\$0.403	\$0.401	\$0.407	\$0.404
Lifetime Savings (MWh)	13,144,743	13,264,331	13,862,596	40,271,670
Cost per Lifetime kWh Saved	\$0.037	\$0.037	\$0.037	\$0.037



Gas Savings Goals:

Savings as % of Projected Therm Sales

GAS	November 2nd Plan		
	2013	2014	2015
Statewide	1.05%	1.13%	1.15%
National Grid	1.07%	1.18%	1.19%
NSTAR	1.07%	1.13%	1.19%
CMA	1.10%	1.11%	1.12%
NEG	0.83%	0.84%	0.85%
Berkshire	0.70%	0.76%	0.81%
Unitil	0.69%	0.77%	0.86%

GAS	November 2nd Plan			
	2013	2014	2015	2013-2015
Sales (Therms)	2,151,166,829	2,150,793,782	2,163,251,593	6,465,212,204
Total Annual Savings (Therms)	22,661,039	24,401,130	24,949,014	72,011,183
Savings as % of Sales	1.05%	1.13%	1.15%	1.11%
Budgets	\$168,429,800	\$174,563,392	\$180,092,607	\$523,085,799
Cost per Annual Therm Saved	\$7.43	\$7.15	\$7.22	\$7.26
Total Lifetime Therms	303,974,380	313,021,522	321,318,178	938,314,079
Cost per Lifetime Therm Saved	\$0.554	\$0.558	\$0.560	\$0.557



Program Costs Per \$ of Benefits

ELECTRIC	November 2nd Plan		
	2013	2014	2015
Statewide	\$ 0.204	\$ 0.190	\$ 0.194
National Grid	\$ 0.187	\$ 0.174	\$ 0.178
NSTAR	\$ 0.212	\$ 0.197	\$ 0.203
WMECo	\$ 0.239	\$ 0.235	\$ 0.238
CLC	\$ 0.237	\$ 0.203	\$ 0.206
Unitil	\$ 0.242	\$ 0.229	\$ 0.225

GAS	November 2nd Plan		
	2013	2014	2015
Statewide	\$ 0.404	\$ 0.407	\$ 0.410
National Grid	\$ 0.427	\$ 0.429	\$ 0.427
NSTAR	\$ 0.403	\$ 0.409	\$ 0.410
CMA	\$ 0.354	\$ 0.357	\$ 0.376
NEG	\$ 0.404	\$ 0.428	\$ 0.426
Berkshire	\$ 0.362	\$ 0.348	\$ 0.339
Unitil	\$ 0.418	\$ 0.388	\$ 0.377



GHG Effects of Three-Year Plan

- Supports the achievement of the greenhouse gas (GHG) emissions reductions called for in *Massachusetts Clean Energy and Climate Plan for 2020* (CECP) per Global Warming Solutions Act (GWSA)
- State-wide Goal: Reduce GHG emissions from 1990 levels by 25% by 2020 and 80% by 2050
- Energy efficiency plans account for 7.1% of these reductions



Criteria Pollutant Effects of Three-Year Plan

- Would need to assess the assumptions in on-the-books electric sector measures (such as Mass CAIR) or gas sector measures, to determine whether energy use reductions from EE are already included in measures in SIPs
- EPA has issued *Roadmap for Incorporating Energy Efficiency/Renewable Energy Policies and Programs into State and Tribal Implementation Plans* to begin considering EE in SIPs, see <http://epa.gov/airquality/eere/manual.html>